

An
Inaugural Essay
on the
Medical Effects
of
Ligths and Barkness
by
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of
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Such, naturally, as the Dispositions of Ideas
that in our constant anxiety ^{and desire} for things, would be
comparatively unimportant the greatest and most
inestimable of our enjoyments, because recurring
daily, are passed over unnoted - Forgetfulness arising
that all Comfort and Happiness and Success
commonly, and constantly, continued to us, the value
of the Gift is not estimated nor the accomplishment
of the Donor properly acknowledged -

In attempts to account for the various Phenomena
- of nature it is not less surprising than
surprising to observe how frequently the more
apparent Causes are skipped over and further
sincere ransacked for arguments to make proba-
- ble some favourite theory -

In like manner, in Medicine, who can but
admire the ingenuity of the numerous theories
advanced to explain the different Phenomena of
Disease and the modes of Treatment accommo-
- dated to each of them. In all, however, it has
appeared to me, that while from every Kingdom
Remedies are derived, very little I may say, no others
- too has been paid to the incredible Effects
of Light and Darkness, from observation
on which I propose as the subject of the follow-
ing short Essay -

I do not on these many and various, effects
I will not attempt, because too extensive and be-
- cause unconnected with that view which I pro-
- pose to take of the Subject - No one knows
it is certain which links in the Chain is uncer-
- tain in its effects -

In the Treatment of this Subject, the combi-
- nation of Light as constituting a part of the Me-
- mory of all men, I shall first attempt - The pro-
- perty of this assertion is the natural instruction
Dr. Barton inculcates in his Lectures on the Me-
- taphysics -

That Light is essential to those various
Principles of the Animal Economy constituting
perfect Health may, I think be inferred from
the pale and meagre appearance of those
whose constant occupations are in Cells, fol-
- lowing the Cave, and other Places improving
by the Solar Influence - That other Causes
combine in inducing this Effect, I do not
deny, but that the deficiency of Light has a
direct influence and influence, indirectly, the
very cause - then perfect restoration when again
submitted to its action, incontestably proves -

So considerably says Dr. Dawson, the power
the colour of the Skin is influenced by Light, that
he deems it practicable by confinement in the Dark

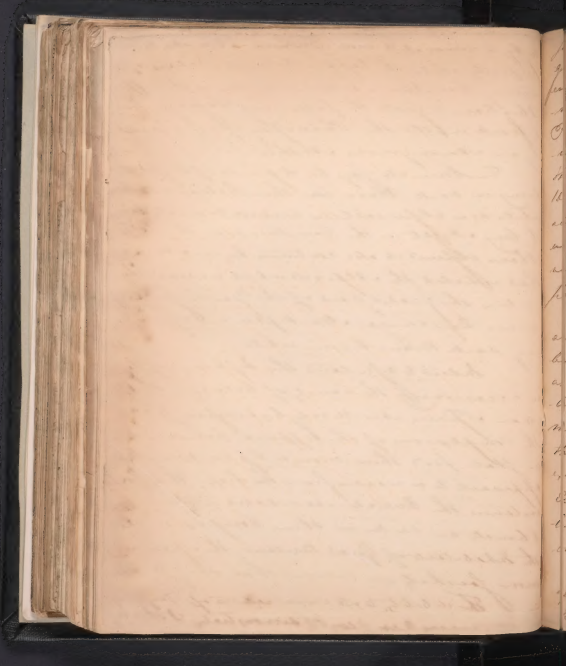
[The page contains approximately 25 lines of extremely faint, handwritten text in cursive script. The ink is very light, making the words difficult to decipher. The text appears to be a continuous paragraph or a series of notes.]

or by a removal to more northern climates, to render
perfectly white the Copper Coloured Nations of
Sunny Countries. And as evidence of this effect
Shewham quotes the following Passage from
a work entitled the Philosophy of Education
by an anonymous Author -

Animals, says he, deprived of light or
living in dark places, lose their colour and become
white as is observable in Arctic Animals, during
the long stops in the Countries near the Pole -
I have observed it also, continues he, in Animals
that inhabit the Alps and which conceal them-
selves the greater part of the Year in subter-
ranean dwellings - Men kept in a Cage in a
very dark Room become white -

Indeed to ascertain the Influence of Light
in occasioning the variety of Colour in the Hu-
man Species, it will only be necessary to compare
the Complexions of the different Countries, and
we shall find them more or less dark as they
approach to or recede from the Line - Thus for
instance the French who inhabit a more southern
climate are darker in their Complexion than
the Inhabitants of Great Britain. The Spaniards
more southerly are browner than they are.

The debility and emaciations of Persons
situated in the north, employed demonstrably I think,



fact, factually, the effect of its absence on the
general Health - The partial and sometimes
sentient deprivation of this indispensable atmo-
sphere in Dungeons, Cells and other gloomy
Places of confinement, with the Damprishness
voided all in consequence of its exclusion explain
the Cause of the very great injury done to the
Health of the Prisoners therefore confined and
also the reason why the meaner sort of Houses
in Great Britain darkened on account of the
very heavy numerous Taxes habit a Race of sick
pale and unhealthy Inhabitants -

As upon a Subject interesting like this
a very surprisingly few Experiments have
been made to ascertain the effects of light
as they respect the absolute necessity of the ad-
tion of this statement to every other for the
maintenance of firm Health, and as between
the Animal and Vegetable Kingdoms there
exists an analogy strikingly great a few
Examples of its effects on the former will, I hope,
be admitted as demonstrating its very essential
importance to the former -

That Light is requisite to the Vegetation
of Plants is acknowledged, I believe by all
Botanists and certainly proved by three very

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is placed in the room, & increases as the
ascends the staircase, at the top is most perceptible
for a while remains so and then with thin & re-
lates to be more certain of the effect intended on the
retinal system by the stimulus of light. This
is what the following experiment made apparent
on a young gentleman my intimate & regular
attending doctor Peter the sensibility of his
-tion being greatly increased by an oblique, &
direct light, from some kind of. Glass &
I closed the windows of the Room in which he
had been seated during the day with a lamp
nearly equal. Thus rendered it perfectly dark
To flash a candle after the total exclusion of
light, I examined his Pulse, which beat with
a fullness not exceeding 70 pulsations with a fre-
quency not exceeding 80 per minute & after
the stimulus - this spirit offered an evident
reaction. Having several times repeated the
Examination with the same result, I caused
to be a number of Candles to be suddenly
introduced as to occasion a very copious flow
The instantaneous effect was, as I expected, a
copious discharge of Tears - To prove
the effect of this Illumination I followed

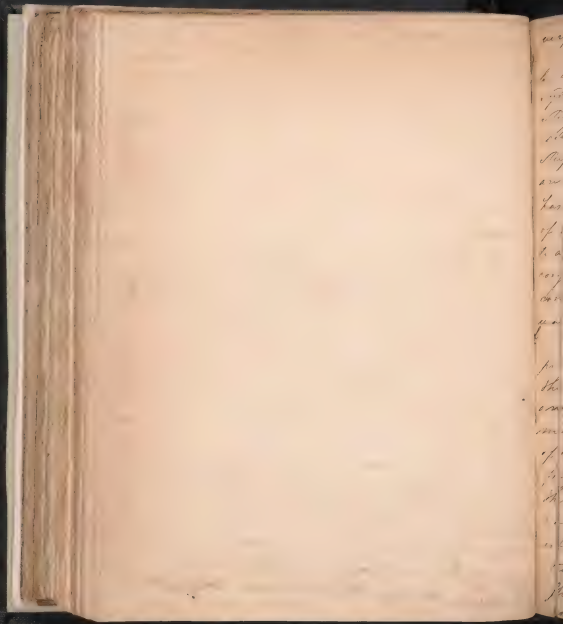


The effect on the Pulse, which was for several
days, Epileptic - from fifty, there it had an-
te fifty for strokes, in the elements with an
increased degree of fulness. The spirits, the
complexion, were exhilarated - Eight or ten elements
afterwards, I renewed my examinations and found
the Pulse increased to fifty, eight strokes but
without any additional fulness - Softness
made several examinations but observed no
alteration. -

2 - The Influence which Light exerts on the
material Spirits, increases it Stimulant -

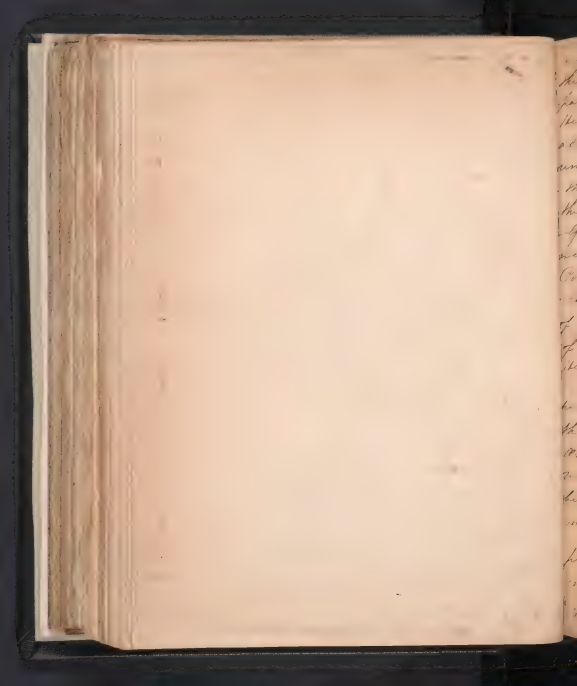
Dr Rush relates the account of a new Slave
who informed him that he had spent a
year in Day Cases, during the greatest part of
which the Sun was upon his face - He
was so much affected by the heat of the
Sun that both of which he supposed occasioned
by the long duration of the illumination
of Light -

So considerably are its effects on the
human system by predisposed, that the elevated and
affected states of the mind are almost
proportional to the splendour or obscurity of the
Solar Rays and hence we may infer that
the hyper sensitive affections are generally
less frequent during the summer - This affords



very of fireable among the stars generally,
the stimulating effects of Light, may be
be explained from its preventing Sleep in the
systems elevated above what Dr Keil calls the
"Sleeping Point" and increased in those
which follow it. Instances of a termination of
Sleep at the first dawn of the morning, are
an many and such, in a case of Typhus Fe-
has not observed with fatal result, the success
of a phlegm and invigorating medicine, it
to a relief and increased night. The ex-
cessiveness of the stimulation of the Light of a
common Candle, in a case related by Dr Keil
as a deprivation of Sleep.

If other arguments be necessary to
prove this - the succession of the Darkness of
the night to the light of the Day, affords an
evident and incontestable one. So beautifully
does it appear to every observer, as all the works
of Nature harmonize that we cannot refrain
from the admission of their perfection and
the acknowledgment that however opposed
each other's form may appear, yet that "each
is labors the good of the other" - The Alter-
nation of night and day is one of the most
striking instances of this - When during the
day from the constant application of Stimuli





Suggestions

In those cases, was of full action, with hyperæsthesia, determination or opthalmia of the eye, which require stimulating remedies, may not the action of Internal Remedies, generally assisted, by a full acquisition of light, in exciting the system and thus prolonging life? And as it is a fact well known to every one, that death occurs in the night, occasioned, no doubt principally, by the abstraction of light, may not the employment of artificial light in continuing these Mental Stimulus, &c. frequently, at least, to inhibit death?

In old chronic Opthalmia, when all the usual remedies have been unsuccessfully employed. Is it not highly probable that exposure to a intense light, by creating a new action, may be attended with cure. Superficial Effects?

In Menalgia, too, when Stimulus some times have been applied to a few part of the Body, as all connected with the Brain with a moderate, or sympathetically. Is it not probable that one Cause of the want of success in these efforts, may be the distraction of the perceptive Stimulus of the Eye, but in the Brain. The most an estimate



from & that is, it not very presumable from
the contract that entered on the Eye & the
ear. That Impressions made thro' the
of this Organ, would act more efficaciously
than those made thro' any other sensations.

In short in all chronic Diseases or Disorders
affecting the "Amulatio", but more particu-
larly those connected with the Brain and Eye,
and of these I would mention the chronic Stage
of Hypochondriasis. Intermitting Hypochondriasis
or as more properly called by Dr. Keil "Sedentaria
mania" Melancholia or more properly "Hypo-
mania" an attention to the proper management
of this & Remedy might, I think under medi-
cal efforts frequently, more efficaciously, and
removed in some measure that impulsion
commonly laid on the Prepositions - Unwarranted
I hope of however - this I deem as map-
ing in Chambers of the Diseased as the regu-
lation of the Degree of Heat, so universally stud-
ied, attended to -

The Increase or diminution of its Power,
as of every other Stimulus, should I think, be
usual -



12
Haven... when... of light...
too off the effects of... I shall...
... other... unimportant, but...
then... To the Physician the advantage...
... from the employment of Barkass as...
Remedy in such Diseases, may I think, be...
great - a nature of... to... it...
in a dark Room - by the partially...
... the... and from... as...
... at... in general... to...
almost unconceivable, up our first remedy -

But in this, as in many other instances, we...
... the dictates of Nature are...
to that, "In plus altis" by our... of...
... the... then... according...
the... of the... or...
of the... we... of...
... that the... of a...
of the... of Barkass in all the...
... as... of Disease has not been...
... attended to -

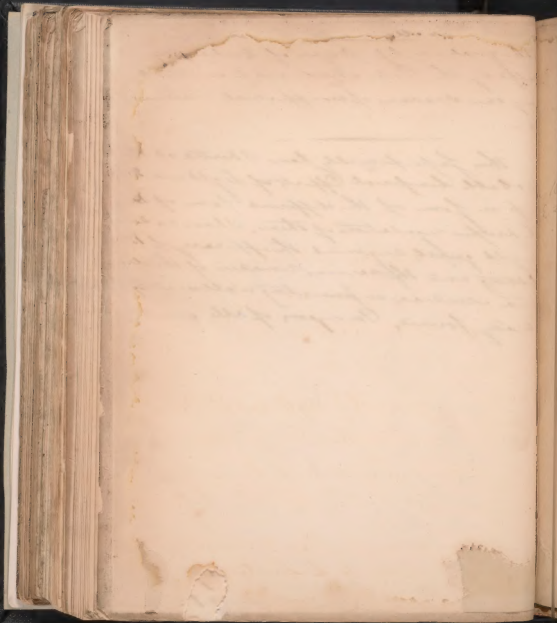
As in the Treatment of all Fevers with
Cephalic Determination, of Actual Heat...
... and... its importance...
... acknowledged and its employment...
... its... for the...



13

transit. In Manicula, however, an altitude
to the greater or less Degree of Darkness, as in-
-duced by the Puls should not be omitted by
any one desirous of an official treatment of
it -

Thus superficially have I hinted at the
probable beneficial Effects of Light and Dark-
-ness in some of the different Forms of Disease.
The proper regulations of them, I have no doubt
might greatly augment the efficacy of Bleed-
-ing and the various remedies of the Ma-
-line Medicine, in preventing or alleviating the
already formed, Paroxysms of all -



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1809

An
Inaugural Dissertation

for

The Degree

of

Doctor of Medicine.

submitted

to the Examination

of

John M'Dowell, L.L.D. Provost

The

Trustees and Medical Professors

of the

University of Pennsylvania.

by G. L. Lawton

1809 35
G. L. Lawton

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